

## VBA: Move Annotation & Check Containment

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This script will move feature-linked annotation to a location determined by 2 hard coded-offset distance parameters from the upper left corner of the linked feature's extent.

The script as written contains a conditional statement that will UNLINK the annotation from the feature providing a -1 FeatureID value if the 'annotation is contained by its linked feature and a -2 FeatureID value if the 'annotation is not contained by its linked feature.

Annotation Before Move

Annotation After Move

Public Sub annoMoveToLinkedFeaturesUpperCorner()

'05/23/08 AGRC-BG

'This script will move feature-linked annotation to a location determined by a  
'user provided offset from the upper left corner of the linked feature's extent.

'IMPORTANT: The script as written contains a conditional statement that will  
'UNLINK the annotation from the feature providing a -1 FeatureID value if the  
'annotation is contained by its linked feature and a -2 FeatureID value if the  
'annotation is not contained by its linked feature.

'You will need to provide layer index numbers and offsets by editing the script  
'below where you see the \*\*\*\* characters

Dim pMxDoc As IMxDocument  
Dim pMap As IMap  
Dim pActiveView As IActiveView

Dim pAnnoFeatureLayer As IFeatureLayer  
Dim pAnnoFeatureClass As IFeatureClass  
Dim pFeature As IFeature  
Dim pAnnoFeature As IAnnotationFeature  
Dim pAnnoElement As IElement

Dim pPolyFeatureLayer As IFeatureLayer  
Dim pPolyFeatureClass As IFeatureClass  
Dim pPolyFeature As IFeature

Dim pFeatureCursor As IFeatureCursor

Dim annoUpperLeft\_X As Double  
Dim annoUpperLeft\_Y As Double  
Dim polyUpperLeft\_X As Double  
Dim polyUpperLeft\_Y As Double  
Dim pTransform2d As ITransform2D  
Dim OffSetX As Double  
Dim OffSetY As Double  
Dim pRelOperator As IRelationalOperator

Dim pEditor As IEditor  
Dim pID As New UID  
Dim editStart As Boolean

'Get a reference to the editor extension  
pID = "esriEditor.Editor"

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Set pEditor = Application.FindExtensionByCLSID(pID)

If pEditor.EditState = esriStateNotEditing Then

    MsgBox "You must be in an edit session to use this script", _
        vbOKOnly, "Error-Exiting..."
    Exit Sub

End If

Set pMxDoc = ThisDocument
Set pMap = pMxDoc.FocusMap
Set pActiveView = pMap

'PARAMETERS

'**** Specify offset distances here (from upper left corner of linked polygon)
OffSetX = 100
OffSetY = -300

'**** Specify layer position in the table of contents
Set pAnnoFeatureLayer = pMap.Layer(0)
Set pPolyFeatureLayer = pMap.Layer(1)

Set pAnnoFeatureClass = pAnnoFeatureLayer.FeatureClass
Set pPolyFeatureClass = pPolyFeatureLayer.FeatureClass

Set pFeatureCursor = pAnnoFeatureClass.Update(Nothing, True)
Set pFeature = pFeatureCursor.NextFeature

editStart = False
If Not pFeature Is Nothing Then

    pEditor.StartOperation
    editStart = True
End If

Do Until pFeature Is Nothing

    Set pAnnoFeature = pFeature 'QI
    Set pAnnoElement = pAnnoFeature.Annotation

    annoUpperLeft_X = pAnnoElement.Geometry.Envelope.XMin
    annoUpperLeft_Y = pAnnoElement.Geometry.Envelope.YMax

    'only works with feature linked annotation features
    If pAnnoFeature.LinkedFeatureID >= 0 Then

        Set pPolyFeature = pPolyFeatureClass.GetFeature(pAnnoFeature.LinkedFeatureID)

        polyUpperLeft_X = pPolyFeature.Extent.XMin + OffSetX
        polyUpperLeft_Y = pPolyFeature.Extent.YMax + OffSetY

        Set pTransform2d = pAnnoElement 'QI

        'move annotation
        pTransform2d.Move (polyUpperLeft_X - annoUpperLeft_X), _
            (polyUpperLeft_Y - annoUpperLeft_Y)

        'Unlink Annotation by setting featureID field to -1 for contained
        'annotation and -2 for problem annotation

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Set pRelOperator = pPolyFeature.Shape
If pRelOperator.Contains(pAnnoElement.Geometry) Then

    pFeature.Value(pAnnoFeatureClass.FindField("FeatureID")) = -1

Else

    pFeature.Value(pAnnoFeatureClass.FindField("FeatureID")) = -2

End If

pAnnoFeature.Annotation = pAnnoElement
'pFeature.Store
pFeatureCursor.UpdateFeature pFeature

End If

Set pFeature = pFeatureCursor.NextFeature

Loop

If editStart Then

    pEditor.StopOperation "VBA: Move Annotation"
    MsgBox "Annotation moved and unlinked. Remember to inspect results and " _
        & "save your edits", vbOKOnly, "Complete..."
    pActiveView.Refresh
End If

End Sub
```